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TITLE

Infographic: Walking on sunshine: scoping review of the evidence for walking and mental health

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The link between physical activity and better mental health is well established.^{1 2} However, substantially less is known about the relationships between walking and mental health.³ Morris and Hardman identified this gap in their seminal “Walking to Health” paper in 1997 and stated that “The pleasurable and therapeutic, psychological and social dimensions of walking, whilst evident, have been surprisingly little studied”.⁴

Walking is an accessible, population level behaviour conducted by persons of all ages and sexes, and as such one with great public health potential.^{5 6} Understanding the extent that walking is associated with better mental health is important for focussing health promotion efforts.

Therefore, we aimed to scope the literature to provide an overview of what has been learned since “Walking to Health” in 1997 in regard to preventing mental ill-being, promoting mental well-being, and the effects of walking interventions. We also aimed to highlight current evidence gaps and research priorities.

Our scoping review identified 5 systematic reviews and 50 individual papers that addressed walking and mental health, showing that the evidence base had grown steadily since 1997.⁷

The main findings are presented in this Infographic. For depression, systematic review evidence showed consistent preventive and intervention effects. For anxiety there were no systematic reviews, but multiple studies showed consistent preventive and intervention effects.

For these outcomes there may be sufficient evidence to promote walking to prevent and treat these conditions.

Evidence for psychological stress, psychological well-being, subjective well-being and social isolation and loneliness was more fragmented and varied in volume and nature of studies, and effectiveness of walking, but no harmful effects were identified. There were no studies for walking and resilience. It was apparent that there has been more research on the negative disease based outcomes (such as depression and anxiety) than for the positive well-being outcomes (such as happiness or subjective well-being).

The setting and context of walking seem to be important variables. The evidence base suggests that across the mental health outcomes there are additional benefits from walking outdoors in natural environments compared to indoor, treadmill based walking.⁷ Importantly, the traditional descriptors of physical activity dosage (i.e. frequency, intensity, duration) may not be the only determinants of mental health outcomes when considering walking.

We anticipate that this scoping review will stimulate more research in the area of walking and mental health. Policy, national guidelines, and practitioners should promote the known mental health benefits of increased walking, and future research should directly address the gaps we have identified.

1 REFERENCES

- 2 1. Ekkekakis P, editor. *Routledge handbook of physical activity and mental health*. London:
3 Routledge, 2013.
- 4 2. Biddle SJH, Mutrie N, Gorely T. *Psychology of Physical Activity. Determinants ,well being*
5 *and interventions*. Third ed. London: Routledge, 2015.
- 6 3. Kelly P, Murphy M, Mutrie N. The Health Benefits of Walking. Walking: Connecting
7 Sustainable Transport with Health: Emerald Publishing Limited, 2017:61-79.
- 8 4. Morris JN, Hardman AE. Walking to health. *Sports Medicine* 1997;**23**(5):306-32.
- 9 5. Strain T, Fitzsimons C, Foster C, et al. Age-related comparisons by sex in the domains of
10 aerobic physical activity for adults in Scotland. *Prev Med Rep* 2016;**3**:90-7.
- 11 6. Kelly P, Kahlmeier S, Götschi T, et al. Systematic review and meta-analysis of reduction in
12 all-cause mortality from walking and cycling and shape of dose response relationship.
13 *Int J Behav Nutr Phys Activ* 2014;**11**.
- 14 7. Kelly P, Williamson C, Niven AG, et al. Walking on sunshine: scoping review of the evidence
15 for walking and mental health. *British journal of sports medicine* 2018;**52**(12):800-06.
16